

Fig.1.

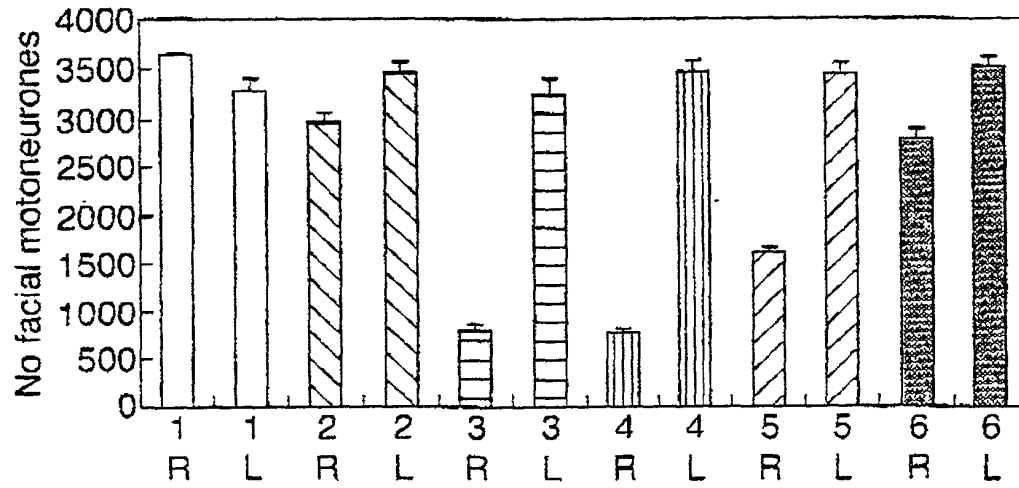
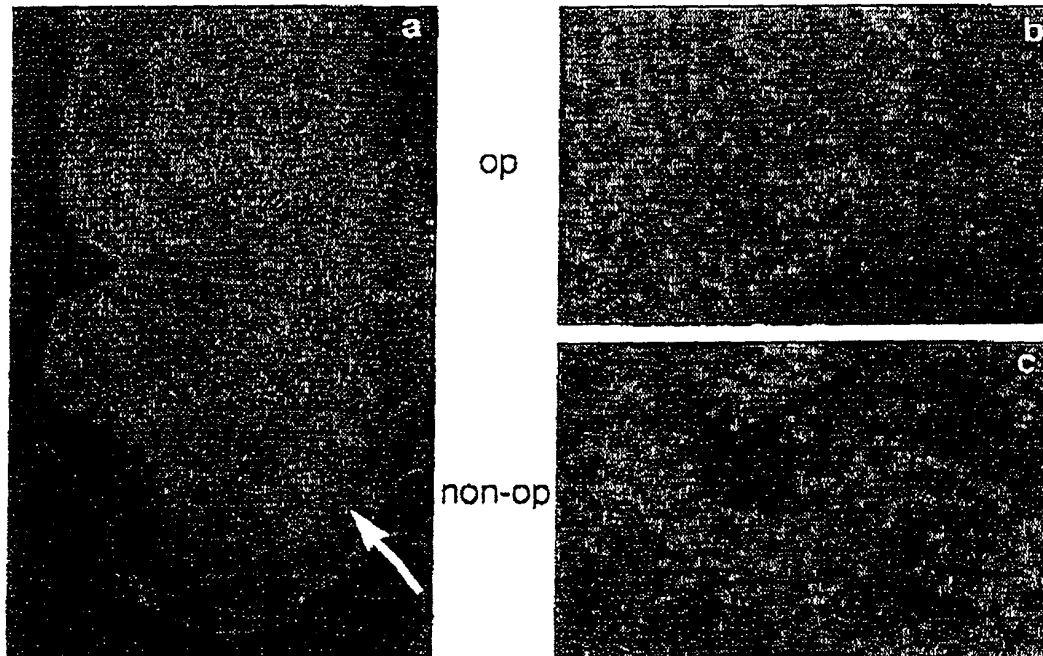


Fig.2.

Avulsion



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Fig.3.  
Plasmid

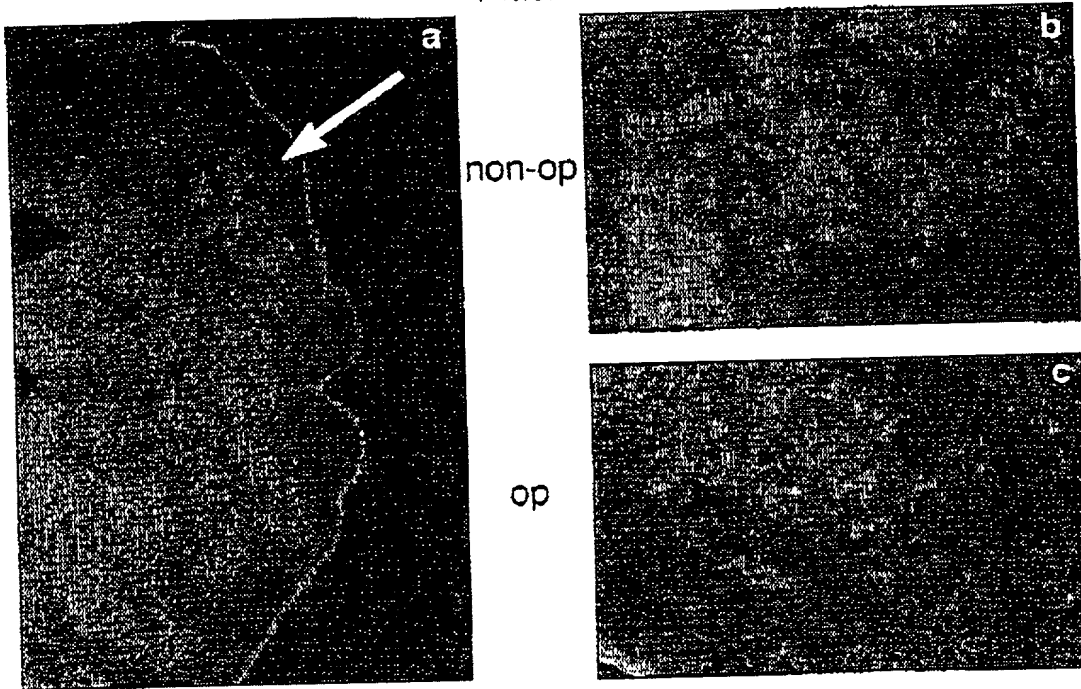


Fig.4.

MGF Plasmid

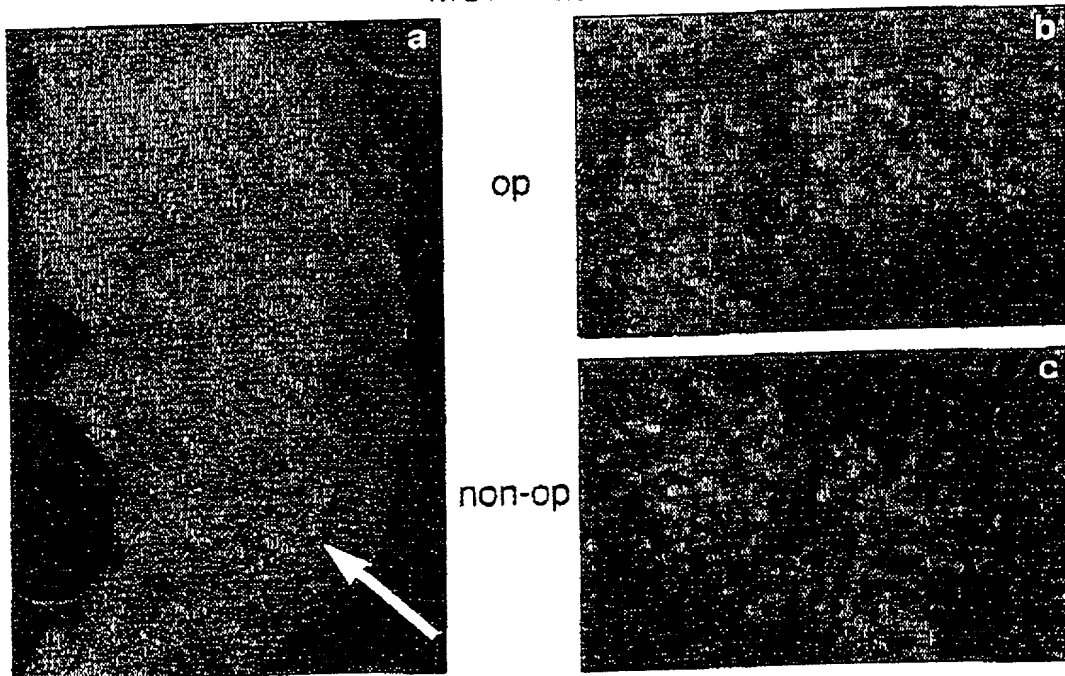


Fig.5.

cdna sequence of Human MGF

Exon 1  
 GGACCGAGACGCTCTCCGGGCTGAGCTGGTGGATGCTCTTCAGTTCTGTGTGGAGACAGGGGCTTTTATTTCACAAGCCCCACAGGGTATGGCTCCAGCAGTCGG  
 Exon 4  
 AGGGCGCTCAGACAGGCATCTGTGGATGAGTCTCTCCGGAGCTGTGATCTAAGAGGCTGGAGATGTATTGGCCACCCCTCAAGCCTGCCAAGTCAGCTCGCTC  
 Exon 5  
 TGTCCGTGCCAGCGCCACACCGACATGCCCAAGACCCAGAAAGTATCAGCCCCCATCTACCAACAAGAACCAAGTCTCAGAGAGGAAGGAAGTACATTGGAAG  
 Exon 6  
 AACACAAGTAGAGGGAGTGCAGGNAACAAGAACAACAGGATGTAGAAGACCCCTTCAGGAGGTGAAGAGGACAGGCCACCCGAGGACCCCTTGTCTCTGCACAGTTA  
 CCTGTAAACATTGCAATACCGGCCCAAAAATAAGTTTGATPCACATTTCAAAGATGGCATTTCCCCCAATGAATAACACAAAGTAAACAT

protein sequence of Human MGF

Exon 3  
 GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnPheValCysGlyAspArgGlyPheTyrPheAsnLysProThrGlyTyrGlySerSerSerAr  
 Exon 4  
 gArgAlaProGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysAlaProLeuLysProAlaLysSerAlaArgS  
 Exon 5  
 erValArgAlaGlnArgHisThrAspMetProLysThrGlnLysTyrGlnProProSerThrAsnLysAsnThrLysSerGlnArgArgLysGlySerThrPheGlu  
 Exon 6  
 GluHisLys

Fig.6.

cdna sequence of Rat MGF

Exon 3  
GGACGAGAGACCCCTTTGCGGGGCTGAGCTGGTGGACGCTCTTCAGTTCGTGTGGACCAAGGGGCTTTTACTTCAACAGCCCCACAGTCATATGGCTCCAGCATTCG  
Exon 4  
GAGGGACCAACAGACGGGCAATCTGGATGAGTGTGGCTTCCGAGCTGTGATCTGAGGAGGCTCGAGATGTACTGTGTCCGTGCAAGCCTACAAAGTCAGCTCGTT  
Exon 5  
CCATCCGGGGCCAGGGCCCACTGACATGCCCCAAGACTCAGAAGTCCCAGGCCCTATCGACACACAAAGGAAGCTGCCAAGGAGAAGGAAAGGAAGTACACTT  
Exon 6  
GAAGAACACAACTAGAGGAAGTGCAGGAACAAGACCCTACAGAATGTAGGAGAGCCTCCCGAGGAACAGAAATGCCACGTCAACCGCAAGATCCCTTTGCTGCTTGA  
GCAACCTGCAAAACATCGGAACACCTGCCAANTATCAATATGAGTTCAATATCATTTTCAGAGATGGGCATTTCCCTCAATGAATAACACAAGTAACAATCCCGGA

ATTC

protein sequence of Rat MGF

Exon 3  
GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnPheValCysGlyProArgGlyPheTyrPheAsnLysProThrValTyrGlySerSerIleAr  
Exon 4  
gArgAlaProGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysValArgCysLysProThrLysSerAlaArgS  
Exon 5  
erIleArgAlaGlnArgHisThrAspMetProLysThrGlnLysSerGlnProLeuSerThrHisLysLysArgLysLeuGlnArgArgLysGlySerThrLeu  
Exon 6  
GluGluHisLys

Fig.7.

cDNA sequence of Rabbit MGF

Exon 3  
GGACCGGAGACGCCTCTGGCGTGTAGCTGGTGGATGCTCTTCAAGTTCGTGTGGAGACAGGGGCTTTTATTTCAACAAGCCACACAGGATACGGCTCCAGCACTCGGAGGGCACC

Exon 4  
TCACACAGGCATCGTGGATGAGTGTCTTCGGAGCTGTGATCTGAGGAGGCTGGAGATGTACTGTGCACCCCTCAAGCCGGCAAGGCGAGCCGCTCCGTCCGTGCCCCAGGGCC

Exon 5  
ACACCGACATGCCCAAGACTCAGAAGTATCAGCCTCCATCTACCAACAAGAAATGAAGTCTCAGAGGAGAGGAAGGAAGTACATTTGAAGAACAACAAGTAGAGGAGTGCAGG

Exon 6  
AAACAAGAACTACAGGATGTAGGAAGACCCCTTCGAGGAGTGAAGAAGACAGGCCACCCGCGAGCCCTTTGCTCTGCACAGTTACTTGTAACATTTGGAATACCCGGCCAAAAAAT

AAGTTTGATCACATTTCAAAGATGGCATTTCCCCCAATGAATAACACAAGTAACATTC

Protein sequence of Rabbit MGF

Exon 3  
GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnPheValCysGlyAspArgGlyPheTyrPheAsnLysProThrGlyTyrGlySerSerSerArgArgAlaPr

Exon 4  
oGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysAlaProLeuLysProAlaLysAlaAlaArgSerValArgAlaGlnArgH

Exon 5  
isThrAspMetProLysThrGlnLysTyrGlnProProSerThrAsnLysLysMetLysSerGlnArgArgGlySerThrPheGluGluHisLys

Exon 6

Fig.8.

cDNA sequence of Human L.IGF-1

Exon 3  
GGACCGAGACGCTCTGCGGGGCTGAGCTGGTGGATGCTCTTCAGTTCGTGTGGAGACAGGGGCTTTTATTTCAACAAGCCCAAGGGTATGGCTCCAGCAGTCGGAGGGCGCC

Exon 4  
TCAGACAGGCATCCTGGATGACTGCTGCTCCGGAGCTGTGATCTAAGGAGGCTGGAGATGATTTGGCAACCCCTCAAGCCTGCCAAGTCAGCTCGCTCTGTCCGTGCCAGCGCC

Exon 6  
ACACCGACATGCCCAAGACCCAGAGGAAGTACATTTGAAGNACGCAAGTAGAGGGAGTGCAGGAAACAAGAACTACAGGATGTAG

Protein sequence of Human L.IGF-1

Exon 3  
GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnPheValCysGlyAspArgGlyPheTyrPheAsnLysProThrGlyTyrGlySerSerSerArgArgAlaPr

oGlnTheGlyIleValaspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysAlaProLeuLysProAlaLysSerAlaArgSerValArgAlaGlnArgH

Exon 6  
isThrAspMetProLysThrGlnLysGluValHisLeuLysAsnAlaSerArgGlySerAlaGlyAsnLysAsnTyrArgMet

Fig.9.

cDNA sequence of Rat L.IGF-1

Exon 3

GGACCACAGACCCCTTTGCGGGGCTGAGCTGGTGGACGCTCTTCAGTTCTGTGTGGACCAAGGGGCTTTTACTTCAACAAGCCCCACAGTCTATGGCTCCAGCATTCGGAGGGCACC

Exon 4

ACAGACGGGCATTGTGGATGAGTGTTCCTTCCGAGCTGTGATCTGAGGAGGCTGGAGATGTACTGTGTCGCTGCAGGCCCTACAAGTCAGCTCGTTCCATCCGGGCCCCAGCGCC

Exon 6

ACACTGACATGCCCAAGACTCAGAAGGAAGTACACTTGAAGAACAACAAGTAGAGGAAGTGCAGGAACAACAGACCTACAGAATGTAGGAGAGCCTCCCGAGGACACAGAAATGCCA

CGTCACCGCAAGATCCTTTGTGCTGTGAGCAACCTGCAAAACATCGGAACACCTGCCAAATATCAATAATGAGTTCAATATCATTTTCAGAGATGGGCATTTCCCTCAATGAATPAC

ACAAGTAAACATTCCTCCGGGAATTC

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Protein sequence of Rat L.IGF-1

Exon 3

GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnpheValCysGlyProArgGlyPheTyrPheAsnLysProThrValTyrGlySerSerIleArgArgAlaPr

Exon 4

oGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysValArgCysLysProThrLysSerAlaArgSerIleArgAlaGlnArgH

Exon 6

isThrAspMetProLysThrGlnLysGluValHisLeuLysAsnThrSerArgGlySerAlaGlyAsnLysTyrTyrArgMet

Fig. 10.

**cdNA sequence of Rabbit-L-IGF-1**

Exon 3

Exon 3  
GGACCGGAGACGCTCTGGCGTTCCTGAGCTGGTGGATGCTCTTCTAGTTCTGTGTGGAGACAGGGGGCTTTTCAACAAGCCCAAGGATACGGGTCCAGCAGTCGGAGGGCACC  
Exon 4

TTCTGACAGGCATCGTGGATTGAGTGCCTGCTTCCGGAGCTGTGATCTGAGGAGGCTGGAGATGTACTGTGTGCACCCCTCAAGCCCGCAAGGCAGCCCGCTCCGTCCGTGCCACAGCGCC

## Exon 6

EXON 9  
ACACCGACATGCCCAAGACTCAGACGGAAGTACATTTGAAGAACACCAAGTACAGGGGAGTCCAGGAACACAGAACTACAGGATGTAGGAGAGACCCCTTCTCAGGAGTGAAGAGGACA

GGCCACCGCAGGACCCCTTTGGCTCTGCACAGTTACCTGTAAACATTGGGAATACCGGCCAAAANAATAGTTTCATCACATTTCAAGATGGCATTTCCCCCAATGAAAATACACAAGTA

AACATTC

### Protein sequence of Rabbit L. IGF-1

**Exon 3**

### Exon 4

Exon 3  
GlyProGlnThrLeuCysGlyAlaGlnLeuValAspAlaLeuGlnPheValCysGlyAspArgGlyPheTyrPheAsnLysProThrGlyTyrGlySerSerArgAlaPr

pGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysAlaProLeuLysProAlaLysAlaAlaArgSerValArgAlaGlnArg

## Exon 6

isthrAspMetProLysThrGlnLysGluValHisLeuLysAsnThrSerArgGlySerAlaGlyAsnLysAsnTyrArgMet



## Exon 4

Hu	MGF -	A   sn Lys Pro Thr Gly Tyr Gly Ser Ser Ser Arg Ala Pro Gln Thr Gly Ile Val Asp Glu Cys Cys phe
Rat	MGF -	A   sn Lys Pro Thr Val Tyr Gly Ser Ser Ile Arg Arg Ala Pro Gln Thr Gly Ile Val Asp Glu Cys phe
Rab	MGF -	A   sn Lys Pro Thr Gly Tyr Gly Ser Ser Arg Arg Ala Pro Gln Thr Gly Ile Val Asp Glu Cys phe
Hu	IGF -	A   sn Lys Pro Thr Gly Tyr Gly Ser Ser Arg Arg Ala Pro Gln Thr Gly Ile Val Asp Glu Cys phe
Rat	IGF -	A   sn Lys Pro Thr Val Tyr Gly Ser Ser Ile Arg Arg Ala Pro Gln Thr Gly Ile Val Asp Glu Cys phe
Rab	IGF -	A   sn Lys Pro Thr Gly Tyr Gly Ser Ser Arg Arg Ala Pro Gln Thr Gly Ile Val Asp Glu Cys phe
Hu	MGF -	Arg Ser Cys Asp Leu Arg Arg Leu Glu Met Tyr Cys Ala Pro Leu Lys Pro Ala Lys Ser Ala Arg Ser Val
Rat	MGF -	Arg Ser Cys Asp Leu Arg Arg leu Glu Met Tyr Cys Val Arg Cys Lys Pro Thr Lys Ser Ala Arg Ser Ile
Rab	MGF -	Arg Ser Cys Asp Leu Arg Arg leu Glu Met Tyr Cys Ala Pro Leu Lys Pro Ala Lys Ala Arg Ser Val
Hu	IGF -	Arg Ser Cys Asp Leu Arg Arg leu Glu Met Tyr Cys Ala Pro Leu Lys Pro Ala Lys Ser Ala Arg Ser Val
Rat	IGF -	Arg Ser Cys Asp Leu Arg Arg leu Glu Met Tyr Cys Val Arg Cys Lys Pro Thr Lys Ser Ala Arg Ser Ile
Rab	IGF -	Arg Ser Cys Asp Leu Arg Arg leu Glu Met Tyr Cys Ala Pro Leu Lys Pro Ala Lys Ala Arg Ser Val
Exon 5		
Hu	MGF -	Arg Ala Gln Arg His Thr Asp Met Pro Lys Thr Gln Pro Pro Ser Thr Asn Lys Asn Thr Lys
Rat	MGF -	Arg Ala Gln Arg His Thr Asp Met Pro Lys Thr Gln Lys Ser Gln Pro Leu Ser Thr His Lys Arg Lys
Rab	MGF -	Arg Ala Gln Arg His Thr Asp Met Pro Lys Thr Gln Lys Tyr Gln Pro Pro Ser Thr Asn Lys Lys Met Lys
Hu	IGF -	Arg Ala Gln Arg His Thr Asp Met Pro Lys Thr Gln Lys -----
Rat	IGF -	Arg Ala Gln Arg His Thr Asp Met Pro Lys Thr Gln Lys -----
Rab	IGF -	Arg Ala Gln Arg His Thr Asp Met pro Lys Thr Gln Lys -----
Exon 6		
Hu	MGF -	Ser Gln Arg Arg Lys G   ly Ser Thr Phe Glu Glu His Lys
Rat	MGF -	Leu Gln Arg Arg Lys G   ly Ser Thr Leu Glu Glu His Lys
Rab	MGF -	Ser Gln Arg Arg Lys G   ly Ser Thr Phe Glu Glu His Lys
Hu	IGF -	----- {Glu Val His Leu Lys Asn Ala Ser Arg Gly Ser Ala Gly Asn Lys Asn Tyr Arg Met
Rat	IGF -	----- {Glu Val His Leu Lys Asn Thr Ser Arg Gly Ser Ala Gly Asn Lys Thr Tyr Arg Met
Rab	IGF -	----- {Glu Val His Leu Lys Asn Thr Ser Arg Gly Ser Ala Gly Asn Lys Asn Tyr Arg Met

Control

IGF

NIGF

ICE

Control